



MSDE Updates to the CTE Committee

January 26, 2023

Maryland State Department of Education



PRESENTATION OUTLINE

1. Perkins Deep Dive
2. Apprenticeships and CTE Data
3. College and Career Readiness Pathways: Apprenticeships in Maryland and the Blueprint
 - a. Student Experiences, Sample Schedules, and Spotlights
 - b. LEA Spotlight: Washington County



Perkins Deep Dive

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2. Apprenticeships and CTE Data
3. College and Career Readiness Pathways: Apprenticeships in Maryland and the Blueprint
 - a. Student Experiences, Sample Schedules, and Spotlights
 - b. LEA Spotlight: Washington County

The Strengthening Career and Technical Education for the 21st Century Act (Perkins V) continued Congress' commitment in providing nearly \$1.3 billion annually for career and technical education (CTE) programs for our nation's youth and adults.

What is Perkins?

- The Strengthening Career and Technical Education for the 21st Century Act (**Perkins V**) was signed into law on July 31, 2018, reauthorized the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV), and **provided nearly \$1.3 billion annually** for career and technical education (CTE) programs.
- Perkins V is intended to develop more fully the **academic knowledge and technical and employability skills** of secondary education students and postsecondary education students who elect to enroll in career and technical education programs and programs of study.
- Funds can be used to, for example (not an exhaustive list):
 - **Prepare students** for high skill, high wage, or **in-demand occupations** in current or emerging professions
 - **Support partnerships** among secondary schools, **postsecondary institutions**, baccalaureate degree granting institutions, **local workforce investment boards**, business and industry, and intermediaries
 - **Increase the employment opportunities** for populations who are **chronically unemployed** or under employed, including individuals with disabilities, individuals from economically disadvantaged families, out-of-workforce individuals, youth who are in, or have aged out of, the foster care system, and homeless individuals.

Perkins V, compared to previous iterations of the federal Perkins program, takes a new focus on special populations, including English Learners and students experiencing homelessness.

How much does the State receive in Perkins Funding?

- Each State receives an **allocation based on the federally-calculated enrollment** eligibility.
- Enrollment eligibility is based on **US Census data** and the number of students aged **5- to 17-years old** in the given years.

Federal Fiscal Year	Total
Fiscal Year 2019	\$17,951,226
Fiscal Year 2020	\$18,227,420
Fiscal Year 2021	\$18,962,621
Fiscal Year 2022	\$19,645,329
Total to Date:	\$74,786,596

Maryland's Fiscal Year 2022 allocation is a 3.60% increase over the State's Fiscal Year 2021 allocation.

How does the State allocate Perkins funding?

The State’s total Fiscal Year 2022 Perkins allocation of \$19,645,329 is divided into three categories:

1. **Local Formula Funds (85%, or \$16,698,530);**
2. State Leadership Funds (10%, or \$1,964,532); and
3. State Administration Funds (5%, or \$982,266)

Federal Fiscal Year 2022 Local Formula Fund Allocations	Amount
Non-Competitive Perkins Formula Grants (95% of Local Formula Funds)	
Secondary (LEA) Formula Grants (65%)	\$10,311,342
Post-Secondary Formula Grants (35%)	\$5,552,261
Sub Total:	\$15,863,604
Competitive Perkins Reserve Fund Grants (5% of Local Formula Funds)	\$834,926
Total:	\$16,698,530

*Calculation information can be found online at: https://s3.amazonaws.com/PCRN/file/Program_Memo-Estimated_FY_2022_Perkins_State_Allocations.pdf

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Federal Fiscal Year 2022 State Leadership Fund Allocations	Amount
MSDE-Directed Grant Programs	\$991,980
CTE Affiliate Grants	\$500,000
Individuals in State Institutions (2% of total Perkins award)	
Correctional Institutions (65%)	\$306,466
Juvenile Justice Facilities (35%)	\$86,440
Sub Total:	\$392,906
Special Population Recruitment	\$19,645
Non-Traditional Field Training and Employment	\$60,000
Total:	\$1,964,532

Distribution of Formula Funds

- **Funds to Secondary Recipients (LEAs)** are based on the formula:
 - 30% is calculated based upon:
 - **The number of 5- to 17-year-olds who reside** in a given school district divided by the number of 5- to 17-year-olds who reside in all school districts in Maryland.
 - 70% is calculated based upon:
 - **The number of 5- to 17-year-olds who reside** in a given school district from **families below the poverty level** divided by the number of 5- to 17-year-olds who reside in all school districts in Maryland from families below the poverty level.
- **Funds to Postsecondary Recipients (Community Colleges)** are based on the formula:
 - **The number of individuals in approved CTE Programs who are Pell Grant Recipients** divided by the number of individuals in all approved CTE Programs in the State who are Pell Grant Recipients.

Calculations based upon US Census data provided by U.S. Department of Education)

Annual Perkins Cycle Timeline

February	<ul style="list-style-type: none"> • Release of Perkins Application to LEAs and Community Colleges for upcoming FY • CTE Pell Grant Recipients Reports and Reserve Fund Grant Applications due to MSDE
March /April	<ul style="list-style-type: none"> • Receive estimated upcoming year Perkins allocation from USDOE • Develop FY 2023 MSDE Perkins Budget by Phase • Reserve Fund Grant Decisions for upcoming FY are made, approval letters sent to recipients
May/June	<ul style="list-style-type: none"> • Perkins Applications are due to MSDE • Maryland’s FY 2023 Perkins Budget must be entered into the USDOE Perkins Portal • Release of State Leadership Grants Processes
July	<ul style="list-style-type: none"> • Receive initial Perkins Allocation (GANS) from USDOE – about 40% of total award • Initiate NOGAs for grants and applications • July 31 – final narrative reports due to MSDE on previous FY grants and applications
August	<ul style="list-style-type: none"> • Summer professional learning in support of CTE programs
September	<ul style="list-style-type: none"> • Final financial reports on previous year grants and applications due • Secondary and Postsecondary CTE Data Submitted to MSDE
Oct/Nov/Dec	<ul style="list-style-type: none"> • Grant close-out process • USDOE Perkins Consolidated Annual Report (CAR) is made available to states
January	<ul style="list-style-type: none"> • Interim Narrative Reports on current FY grants due to MSDE • Consolidated Annual Report due to USDOE

Federal Perkins Requirements

- General Provisions:
 - **Supplement not Supplant**
 - Maintenance of Effort
 - **No funds for CTE programs to students prior to the middle grades** except that equipment purchased with funds under this Act may be used by such students
 - **Prohibition** on the use of funds to **induce out-of-state relocation** of businesses
 - Administrative costs may **not exceed 5%** of the grant
- For Local Education Agency Grantees:
 - Minimum Allocation must be **greater than \$15,000**
 - Waiver may be granted for less than minimum award **if the LEA is located in a rural, sparsely populated area**
- For Community College Grantees:
 - Minimum Allocation must be **greater than \$50,000**
 - Waiver may be granted for the less than minimum award **if the consortium of community colleges is located in a rural, sparsely populated area**

Perkins – Federally Defined Success Measures

- **Core Indicators of Performance** at the secondary level for CTE concentrators must be valid and reliable, and that include, at a minimum, measures of each of the following:
 - The **percentage of CTE concentrators who graduate high school**, as measured by the four-year **adjusted cohort graduation rate**.
 - **CTE concentrator proficiency** in the challenging State academic standards, as measured by the State’s **academic assessments MCAP (PARCC) for math and English and MISA for science attainment**.
 - The **percentage of CTE concentrators** who, in the second quarter after exiting from secondary education, are **in postsecondary education, or advanced training, military service a service program, or are employed**.
- Indicators of **career and technical education program quality** as follows:
 - The **percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential**.
 - The **percentage of CTE concentrators who have met state-recognized CTE standards in the program, including assessments aligned to industry standards, if available and appropriate**.
- The **percentage of CTE concentrators in career and technical education programs of study that lead to non-traditional fields**.

Perkins – LEA Spotlight: Washington County Public Schools

- Formula Allocation: \$376,907
- CTE Enrollment = 7,092
- Example Initiatives:
 1. WCPS has **expanded Interactive Media Production** to include Smithsburg High School and is **implementing a new Diesel Technology program** and updating multiple programs at WCTHS.
 2. WCPS will maintain a **high number of students involved with the Apprenticeship Maryland Program**, which supports workforce development initiatives. The Office of CTE will work to **increase awareness and importance of taking and passing industry certifications and apprenticeships**.
 3. The WCPS Superintendent has charged principals to **increase dual enrollment**, as appropriate, and support the creation of evolving programs.

Perkins – LEA Spotlight: Frederick County Public Schools

- Formula Allocation: \$415,822
- CTE Enrollment = 11,321
- Example Initiatives:
 1. Planning for **consultation with participating employers on work plan development & mentoring strategies** to increase youth apprenticeship opportunities.
 2. With **AP enrollment increasing**, there is a need to **increase the professional development** and resources for instruction. Enrollment continues to increase countywide (34% increase in Computer Science A & 18% increase in Computer Science Principles), and FCPS is focusing on CTE completers.
 - FCPS has a **three-course pathway with AP courses running in all high schools**. A cyber experience course for all students is being developed.
 3. **Non-traditional enrollment in construction trades** within FCPS and Frederick Community College continues to be under-represented. A work group made up of FCPS and FCC staff as well as industry is working together to **collaborate on several marketing strategies** that will jointly benefit both organizations.

Perkins – LEA Spotlight: Queen Anne's County Public Schools

- Formula Allocation: \$75,407
- CTE Enrollment = 2,914
- Example Initiatives:
 1. **Students with Disabilities (SWD)** are underrepresented in the Health and Biosciences CTE cluster. QACPS will **identify opportunities for success for SWDs, explore opportunities to increase enrollment of SWDs** in the Health and Biosciences CTE cluster, and **provide professional development for counselors** to educate them about program requirements and enrollment requests for students with disabilities.
 2. QACPS is purchasing essential materials of instruction to make the **Project Lead the Way (PLTW) engineering program more successful** with the hopes of **attracting more female students**. QACPS is also using Perkins Reserve Fund Grant award resources to market engineering programs to **females in elementary through high school grades**. For staff development, funds pay for two attendees to attend the PLTW Annual Summit where staff receive the most up to date **instructional practices and techniques** to then provide professional development to other teachers when they return.

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Apprenticeships and CTE Data

Understanding how districts and schools support students through CTE and apprenticeship programs.

45% Goal

(a)(1) On or before December 1, 2022, the CTE Committee shall establish, for each school year between the 2023-2024 school year and the 2030-2031 school year, inclusive, statewide goals that reach **45% by the 2030-2031 school year, for the percentage of high school students who, prior to graduation, complete the high school level of a registered apprenticeship or an industry-recognized occupational credential.**

(2) To the extent practicable, the CTE Committee shall ensure that the **largest number of students achieve the requirement of this subsection by completing a high school level of a registered apprenticeship program** approved by the Division of Workforce Development and Adult Learning within the Maryland Department of Labor.

- Maryland in SY 2020-2021 had **57,423 graduates.**
- To meet the **45% goal, 25,840 of these graduates** would have needed to complete an apprenticeship or industry credential.
- **In SY 2020-2021, about 7% of graduates met these criteria.**

CTE Completers and Concentrators

- **CTE Concentrator:**
 - A student who has **completed at least two courses in a single career and technical education program of study and enrolled in the third course.** A “concentrator course” is the third course of a CTE completer program as identified by MSDE.

- **CTE Completer:**
 - Indicates whether **the student completed the entire sequence of courses in the Maryland CTE Program of Study.** Any student identified as a **CTE completer should also be identified as a CTE concentrator.**

The More Jobs for Marylanders Act and Career Youth and Public Sector Apprenticeship Act established a state goal that 45% of high school students will by January 1, 2025:

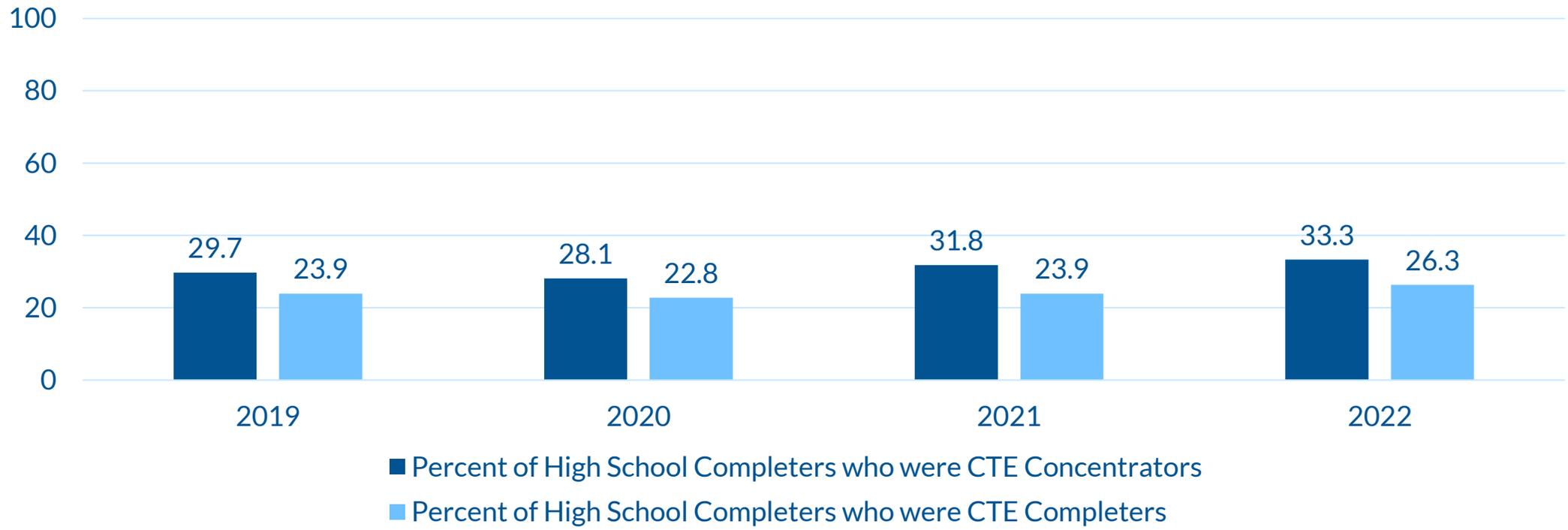
- complete a CTE program of study,
- earn industry-recognized credentials, or
- complete a registered youth or other apprenticeship.

Completion of a CTE Program of Study is not included in the Blueprint goal.

Maryland Students Completing High School

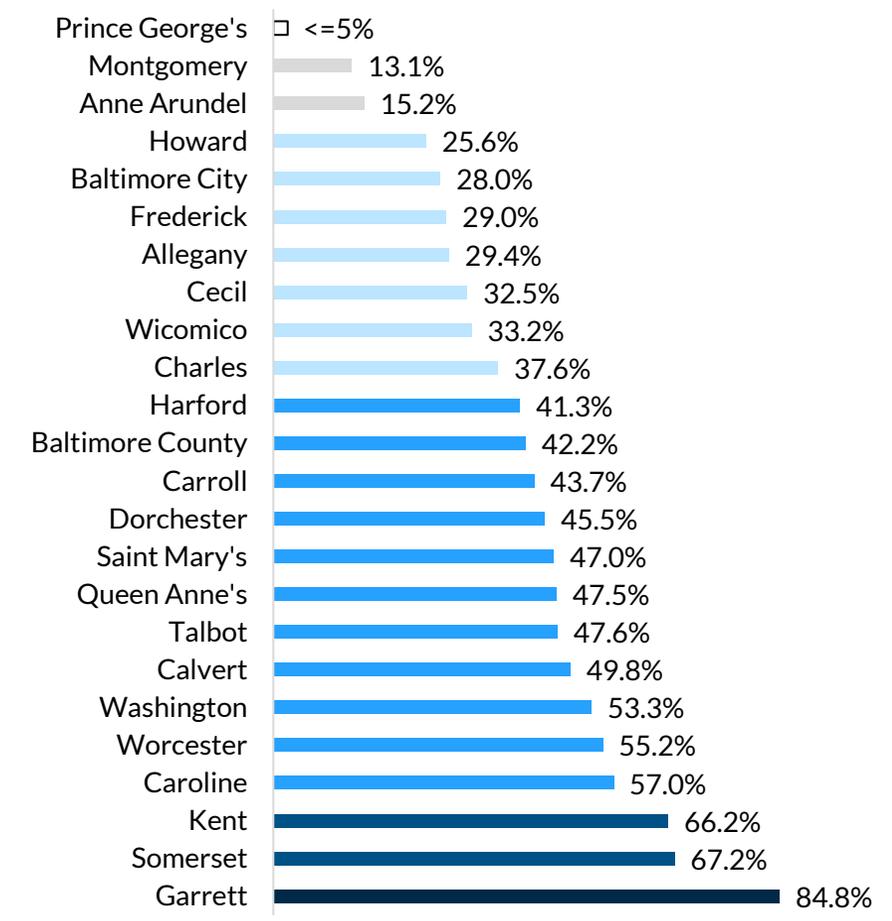
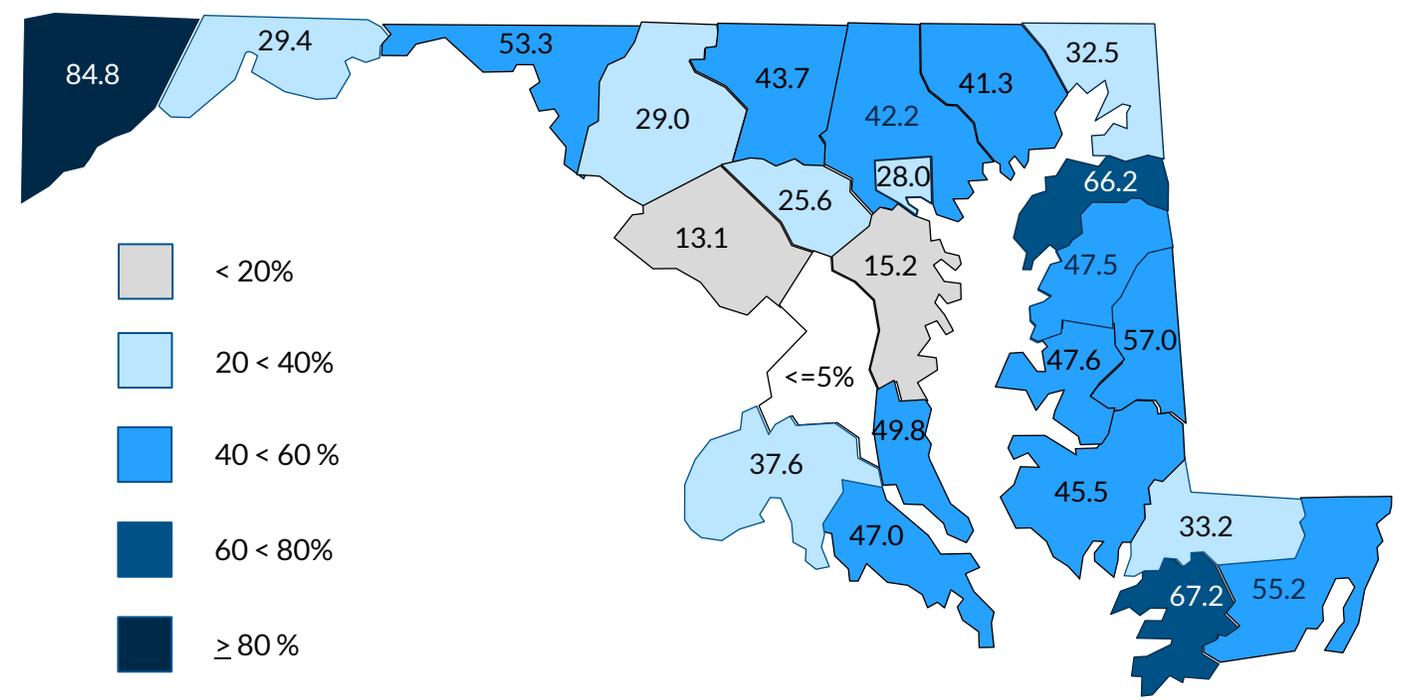
Statewide, a greater percentage of Maryland Students are completing high school as a CTE Concentrator or Completer since SY 2018-2019.

Percent of High School Completers who were CTE Concentrators and Completers



Maryland CTE Completer Rate by LEA, SY 2021-2022

Statewide, 26.3% of SY 2021-2022 high school graduates completed a CTE program of study.



CTE completion rates for SY 2021-2022 high school graduates
Source: High School Data Collection SY 2021-2022

Maryland CTE Dashboards

The MDCTEDATA.ORG website is a collection of data compiled on an annual basis to provide information on Career and Technical Education (CTE) programs to all stakeholders; to support school improvement efforts; to provide accountability at the state, school system, and school level for reporting; and to communicate Maryland's story of CTE success.

CTE® More Jobs for Marylanders Act

IN MARYLAND PUBLIC SCHOOLS

Local School System: State of Maryland | Year: 2021

PERCENT OF MORE JOBS FOR MARYLANDERS (MJFM) TARGET MET

% Met MJFM Requirements	% Away from 45% Goal	% CTE Completers	% Attained Industry Credential	% Apprenticeship Completers	% Attained Industry Credential but not CTE Completer	% Apprenticeship Completer ONLY	% Completed An Apprenticeship but not Industry Credential
25.03%	19.97%	23.90%	6.53%	0.28%	1.12%	0.01%	0.15%

Percent of Target Met=% CTE Completers+%Attained Industry Credential but not CTE Completer+%Apprenticeship Completer ONLY

BREAKDOWN

Gender

Female

Male

Race

American Indian

Asian

Black

Hispanic

Multi Race

Pacific Islander

White

English Learner

N

Y

Economically Disadvantaged

N

Y

Students with Disabilities

N

Y

CTE® More Jobs for Marylanders Act

IN MARYLAND PUBLIC SCHOOLS

Local School System: State of Maryland | Year: 2021

DEFINITIONS OF DATA ELEMENTS

Definition for CTE Completion
CTE completion requires students to fulfill all requirements of a MSDE-approved CTE program of study and exit high school with a diploma or certificate. All CTE programs of study are aligned to academic and industry standards, provide the opportunity for students to earn industry-recognized and/or postsecondary credentials, and provide the opportunity for students to participate in work-based learning experiences. Over 40% of Maryland public high school students are enrolled in a CTE program.

Definition for Industry-Recognized Occupational or Skill Credential
An industry-recognized occupational or skill credential is a verification of an individual's qualification and competence in a specific career area. Credentials are typically issued by a qualified third-party such as a vendor, industry association, or governing board after an individual has completed an assessment demonstrating proficiency for a specific skill set. Only state-approved industry credentials aligned with a MSDE-approved CTE program of study are identified for reporting in Maryland's data collections. This dashboard report identifies industry credentials earned by CTE concentrators. CTE concentrators are students that have completed two courses in a CTE program of study and have enrolled in a third.

Definition for Completion of a Registered Youth or Other Apprenticeship
Completion of a registered youth or other apprenticeship is defined as the completion of a work-based learning experience included as part of a school-to-apprenticeship program in collaboration with selected sponsors of registered apprenticeship programs, the Apprenticeship Maryland program and/or other apprenticeship training programs approved by the Maryland Apprenticeship and Training Council in accordance with § 11-405 of the labor and employment article. Work-based learning experiences must take place at a work-site and must be a paid experience (at least minimum wage) with a minimum of 450 hours.

TREND DATA TOWARDS REACHING 45% GOAL BY 2025

School System	2016 45% Goal Attainment*	2017 45% Goal Attainment*	2018 45% Goal Attainment	2019 45% Goal Attainment	2020 45% Goal Attainment	2021 45% Goal Attainment
Allegany	23.82%	23.08%	24.56%	21.45%	17.18%	29.72%
Anne Arundel	12.35%	11.97%	14.30%	15.01%	12.01%	12.33%
Baltimore City	31.18%	29.48%	31.51%	33.68%	34.08%	34.41%
Baltimore County	23.49%	24.43%	24.89%	25.21%	21.18%	24.75%
Calvert	41.26%	41.95%	40.75%	48.73%	49.69%	42.26%
Caroline	51.08%	35.87%	47.28%	53.41%	57.41%	52.94%
Carrill	42.45%	43.35%	38.70%	44.28%	44.03%	39.33%
Cecil	23.86%	30.83%	32.77%	33.72%	36.54%	34.06%
Charles	36.83%	42.14%	37.81%	27.09%	24.52%	37.61%
Dorchester	42.16%	48.81%	44.22%	44.36%	40.89%	41.04%
Frederick	23.85%	20.89%	21.28%	19.87%	21.92%	22.27%
Garrett	70.18%	68.77%	73.31%	73.68%	81.40%	79.92%
Harford	40.08%	38.38%	33.88%	32.33%	26.12%	40.55%
Howard	17.68%	19.51%	19.32%	18.81%	19.16%	23.53%
Kent	70.31%	61.76%	66.21%	74.14%	62.69%	70.83%
Maryland	22.84%	22.47%	23.64%	24.21%	23.38%	25.03%
Montgomery	9.74%	10.20%	10.26%	12.86%	13.64%	14.10%
Prince George's	9.72%	10.85%	13.27%	17.76%	13.24%	13.30%
Queen Anne's	43.15%	42.51%	47.39%	19.39%	55.36%	44.46%
SEED	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Somerset	52.74%	57.74%	43.79%	55.13%	55.92%	62.58%
St. Mary's	43.32%	40.70%	44.14%	45.62%	46.22%	46.05%
Talbot	56.64%	43.03%	56.68%	49.50%	39.68%	46.75%
Washington	45.58%	33.37%	45.43%	45.88%	51.16%	53.27%
Wicomico	26.08%	20.49%	19.26%	24.54%	24.76%	24.55%
Worcester	40.47%	42.40%	45.63%	46.82%	51.63%	59.21%

*45% Goal recalculated using only CTE completion rates as accurate industry credential data collection in 2016 and 2017 was not yet established.

Data on CTE completion numbers and rates. Visit the [Maryland CTE data dashboards](#)

CTE Completers, Industry Credentials, and Apprenticeships



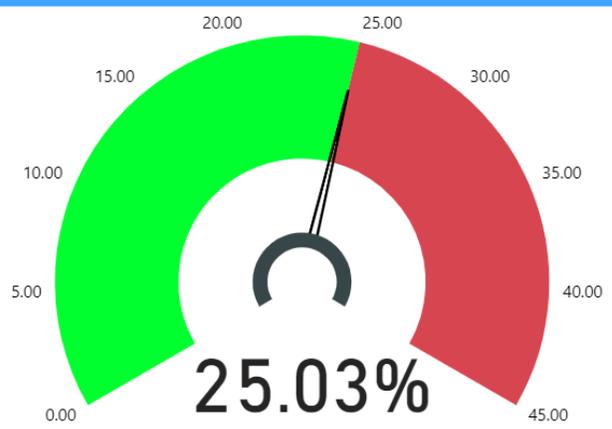
Learning that works for Maryland

CTE[®] More Jobs for Marylanders Act



IN MARYLAND PUBLIC SCHOOLS

PERCENT OF MORE JOBS FOR MARYLANDERS (MJFM) TARGET MET



BREAKDOWN

Local School System: State of Maryland
Year: 2021

Gender

- Female
- Male

English Learner

- N
- Y

Race

- American Indian
- Asian
- Black
- Hispanic
- Multi Race
- Pacific Islander
- White

Economically Disadvantaged

- N
- Y

Students with Disabilities

- N
- Y

% Met MJFM Requirements	% Away from 45% Goal	% CTE Completers	% Attained Industry Credential	% Apprenticeship Completers	% Attained Industry Credential but not CTE Completer	% Apprenticeship Completer ONLY	% Completed An Apprenticeship but not Industry Credential
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Last Updated: January 26, 2022

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Maryland CTE Dashboards

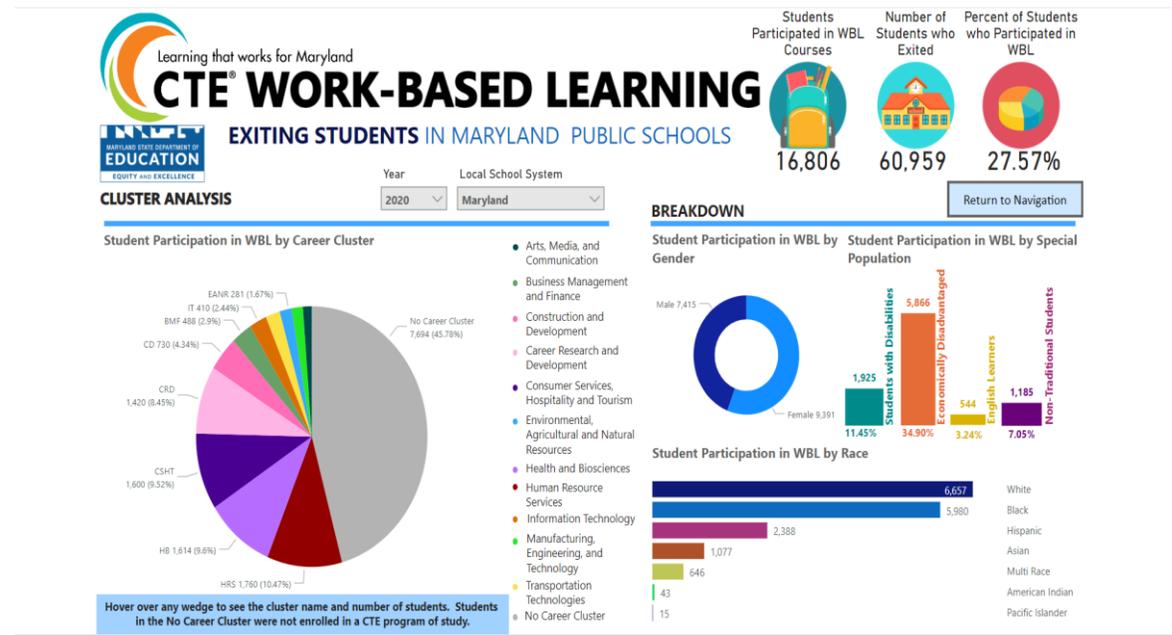
The CTE Work-Based Learning data dashboard provides an overview of Work-Based Learning in Maryland.

Overview of Work-Based Learning (WBL) in Maryland

Work-based learning is defined as "...an instructional strategy that enhances classroom learning by connecting it to the work place" (U.S. Department of Education, 2017) All Maryland students have the opportunity to participate in a variety of work-based learning experiences such as internships and apprenticeships. The Division of Career and College readiness released a [work-based learning continuum and supporting resources](#) that serve as a guide for the implementation of work-based learning experiences. Annually, work-based learning surveys are sent to students, employers, and work-based learning coordinators in schools to collect data about wages earned, preparedness of student, and satisfaction of work-based learning experiences.

The Work-Based Learning Dashboard shares work-based learning participation data and survey responses. The dashboard pages identifies:

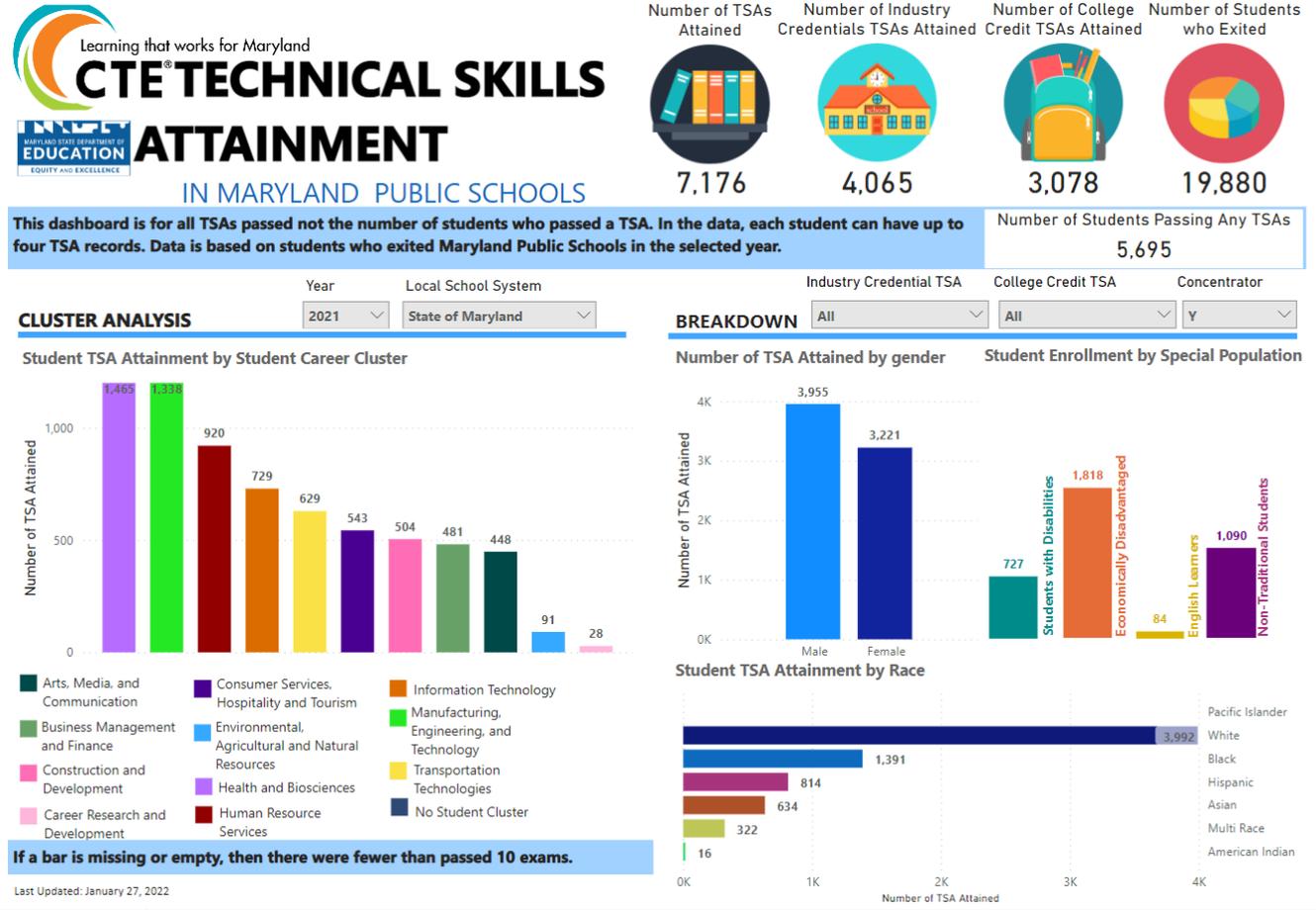
1. Students that participated in work-based learning experiences that have exited* a Maryland public school during the 2019-2020 school year as denoted by enrollment in a work-based learning course in the 2019-2020 or 2018-2019 school years.
2. Students that participated in an apprenticeship that have exited* a Maryland public school during the 2019-2020 school year as denoted by enrollment in an apprenticeship course in the 2019-2020 or 2018-2019 school years.
3. The set of students who participated in work-based learning in the selected year.
4. The set of student responses to the work-based learning survey in the selected year.
5. The set of employer responses to the work-based learning survey in the selected year.



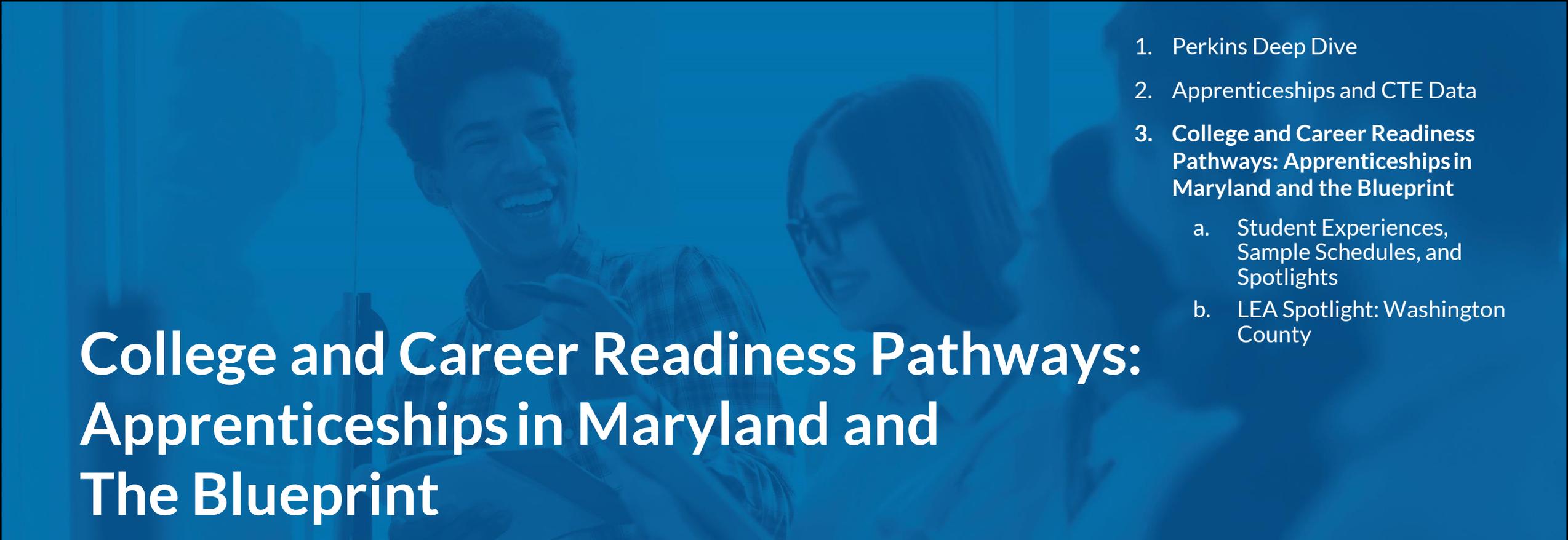
Data on CTE completion numbers and rates. Visit the [CTE Work-Based Learning data dashboard](#)

Technical Skills Assessments

- Technical Skills Assessments are locally-developed end-of-course assessments that lead to college credit or third-party assessments that lead to a recognized postsecondary credential.
- Postsecondary credentials may include:
 - an industry-recognized certificate or certification;
 - a certificate of completion of an apprenticeship;
 - a license recognized by the State of Maryland or Federal Government; or
 - an associate degree (as defined by section 3 of the Workforce Innovation and Opportunity Act).



Data on CTE completion numbers and rates. Visit the [CTE Technical Skills Attainment In Maryland Public Schools data dashboard](#)



College and Career Readiness Pathways: Apprenticeships in Maryland and The Blueprint

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Local context and opportunities to expand Youth/High School Apprenticeships in Maryland

History of Youth Apprenticeships in Maryland

- In 2015, House Bill 942 established a pilot program for **Youth Apprenticeships** to prepare students to enter the workforce by providing on-site employment training and related classroom instruction needed to obtain a license or certification for a skilled occupation. The pilot program began in the summer of 2016 and lasted for two years.
- In 2018, MSDE and the Department of Labor expanded the **Apprenticeship Maryland Program (AMP)** to be a permanent state-wide program as a Career and Technical Education (CTE) Program of Study.
- The Apprenticeship Maryland Program quickly expanded from the 2 pilot counties to nearly all of the 24 districts across Maryland.

Partner Organizations

- MSDE
- Maryland Department of Labor
- Local Education Agencies (LEA)
- Maryland Apprenticeship Training Council (MATC)
- Youth Apprenticeship Advisory Council (YAAC)
- Maryland Department of Commerce
- Youth Apprenticeship Sponsors/ Employers
- Blueprint CTE Committee

Youth/High School Apprenticeships in Maryland

- The Apprenticeship Maryland Program (AMP) is a **Maryland CTE Program of Study**
 - LEAs complete the **CTE Program of Study proposal form**, which is an agreement between MSDE and the LEA. Each LEA needs to create a **local advisory committee to oversee the program and develop polices** for its implementation.
- A youth apprentice receives **supervised, structured, on-the-job training from a mentor** in a specific in-demand occupation.
- Youth apprentices **work a minimum of 450 hours** with a certified employer. Participating students typically work during the summer after their junior year and during their senior year.
- Youth apprentices also **participate in a classroom-setting related instruction, as set by the employer.**

PROGRAM REQUIREMENTS



Steps for an Employer to Sponsor a Youth Apprenticeship



To learn more, go to: labor.maryland.gov/employment/appr/youthappr.shtml

MSDE's Responsibilities

- **Review and approve Apprenticeship Maryland Program (AMP) proposals and programs of study.**
- **Conduct technical assistance visits and remote support for LEAs.**
- **Convene LEA apprenticeship coordinators on a regular basis through virtual and in-person meetings.**
- **Work with LEAs to ensure youth apprenticeship data is collected.**
- **Actively participate in the Youth Apprenticeship Advisory Committee.**
- **Assist the Department of Labor in recruiting youth apprenticeship employers and determining whether occupations should host an apprentice.**

LEA Responsibilities

- **Recruit students and employers** to participate in apprenticeships and facilitate the matching process.
- **Support students throughout the apprenticeship process**, including all official applications and registration forms.
- **Monitor a student's progress** through the apprenticeship program and provide **counseling or other accommodations** when needed.
- Collaborate with employers to **determine applicable related instruction**.
- Coordinate with MD Labor to **conduct and attend site visits of potential employers**.

Department of Labor's Responsibilities

- **Recruit and coordinate** with employers.
- Provide **technical assistance to employers applying** for approval.
- **Vet all employers** as part of the registration process, including a site visit in conjunction with the LEA.
- **Vet occupations** to determine if they are **apprenticeable**. Apprenticeable occupations are those that **require relevant and definable on-the-job learning** and instruction for a new employee to become proficient.
- **Maintain a database** that lists participating employers by LEA.
- Provide the initial **vetting of wages, safety, and on-the-job learning**.

Employer Responsibilities

- **Interview and hire** youth apprentices for a **minimum of 450 hours**.
- Pay youth apprentices **minimum wage or higher**.
- **Instruct** youth apprentices in the **required competencies** for position.
- **Provide safety instruction** in work practices.
- **Assign a mentor and skilled trainers** to work with the youth apprentice.
- Allow **release time from work for mentors and trainers** to attend relevant trainings or meetings.
- Work with the school system coordinator to **identify the classroom-related instruction**.
- **Sign and comply with the requirements** in the youth apprenticeship agreement.
- Comply with all applicable **state and federal child labor laws and regulations**.
- Extend an **offer of employment to the youth apprentice upon completion**. (Strongly encouraged, but **not required**.)

Blueprint Policy Area 3: College and Career Readiness

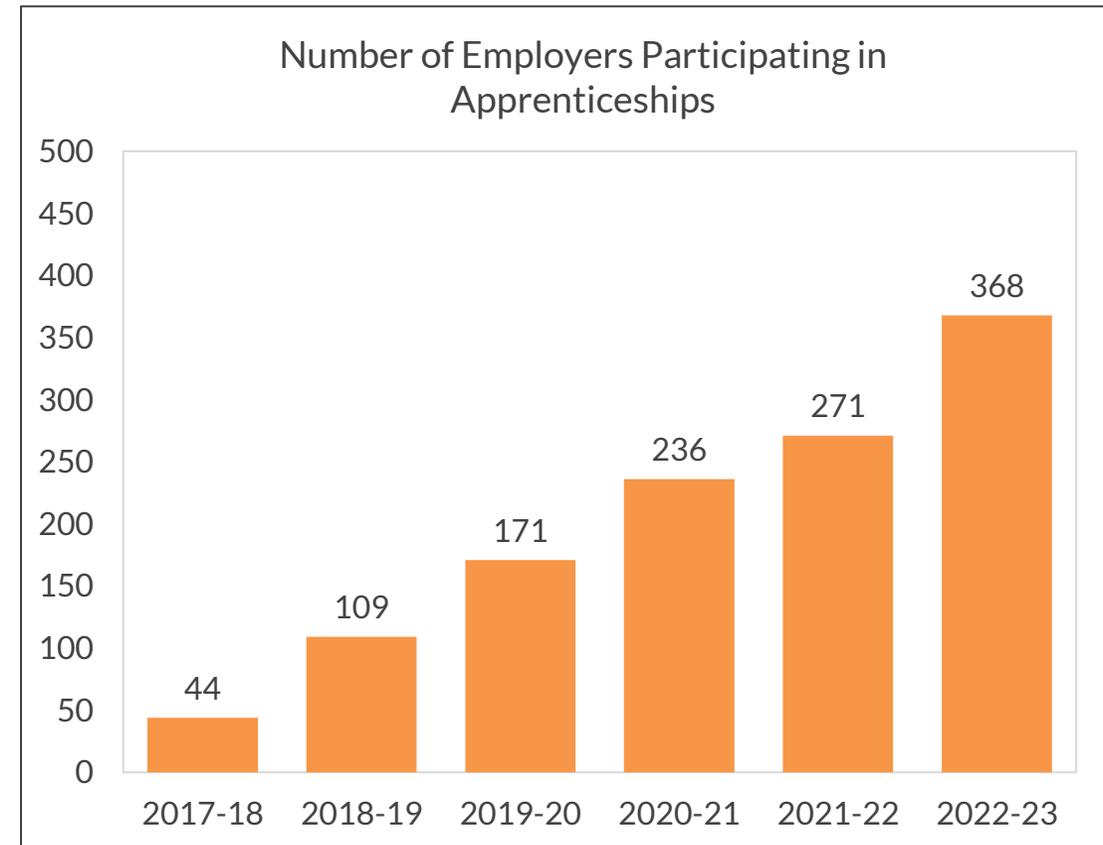
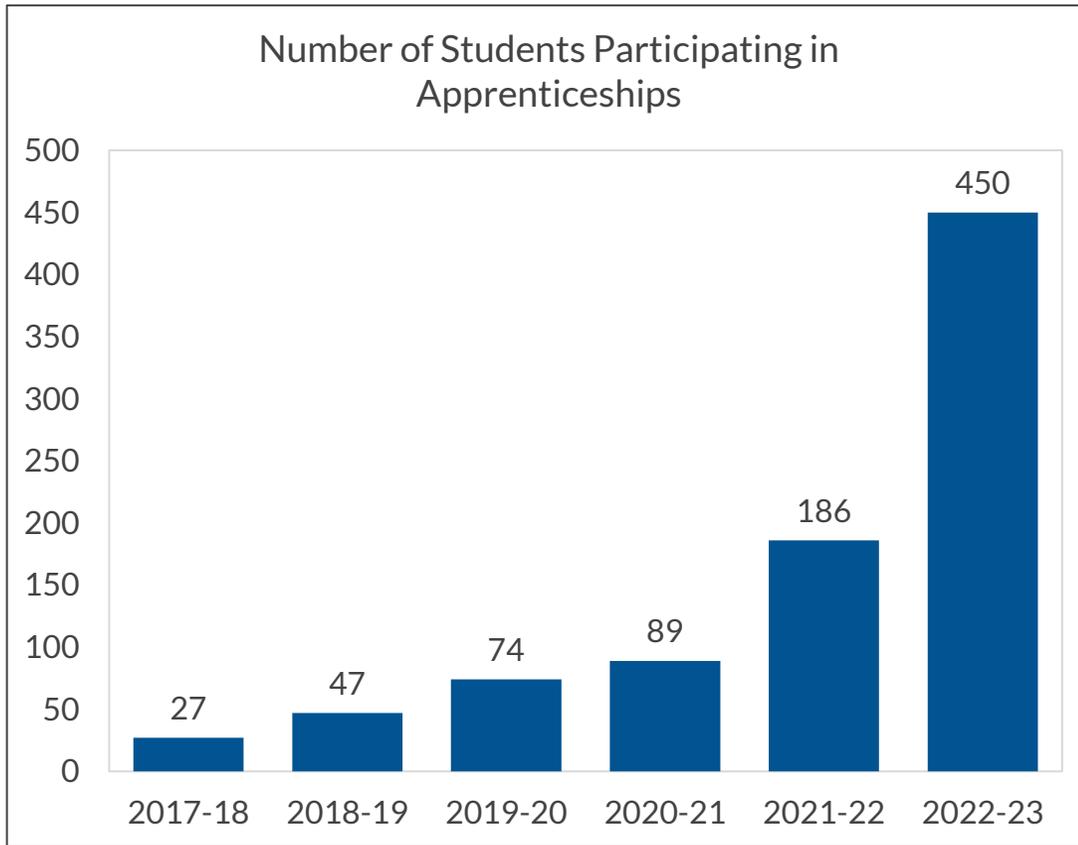
- Sets a new **College and Career Readiness standard** after a rigorous research study is conducted.
- Develops **Post-CCR pathways** to advance learning and earn a credential. Once a student meets the CCR Standard, they enter a pathway:
 - IB Diploma, AP program, or Cambridge AICE Diploma
 - Dual enrollment or early college program
 - Career and Technical Education (CTE) program
- Expands the **CTE system** that is aligned with industry’s needs
 - CTE programs, **including apprenticeships**, are developed in consultation with employers, trade associations, labor organizations, community colleges, etc. through a new CTE Committee
 - Develops **CCR-support pathways** for students to achieve the CCR standard

Career and Technology Education (CTE) Committee

- Establishes a new **CTE Committee** within the Governor's Workforce Development Board.
 - Members include representatives from the Departments of Education, Labor, and Commerce; the Higher Education Commission; labor organizations; trade associations; and other experts.
- **Post-CCR Pathways create connections to the workforce** and for students to earn meaningful credentials while still in high school.
- Sets yearly incremental **statewide goals to achieve 45% of high school students completing an apprenticeship** or industry credential by 2030.
- **CTE Committee helps to oversee** successful implementation of these initiatives.

Expansion of Youth Apprenticeships

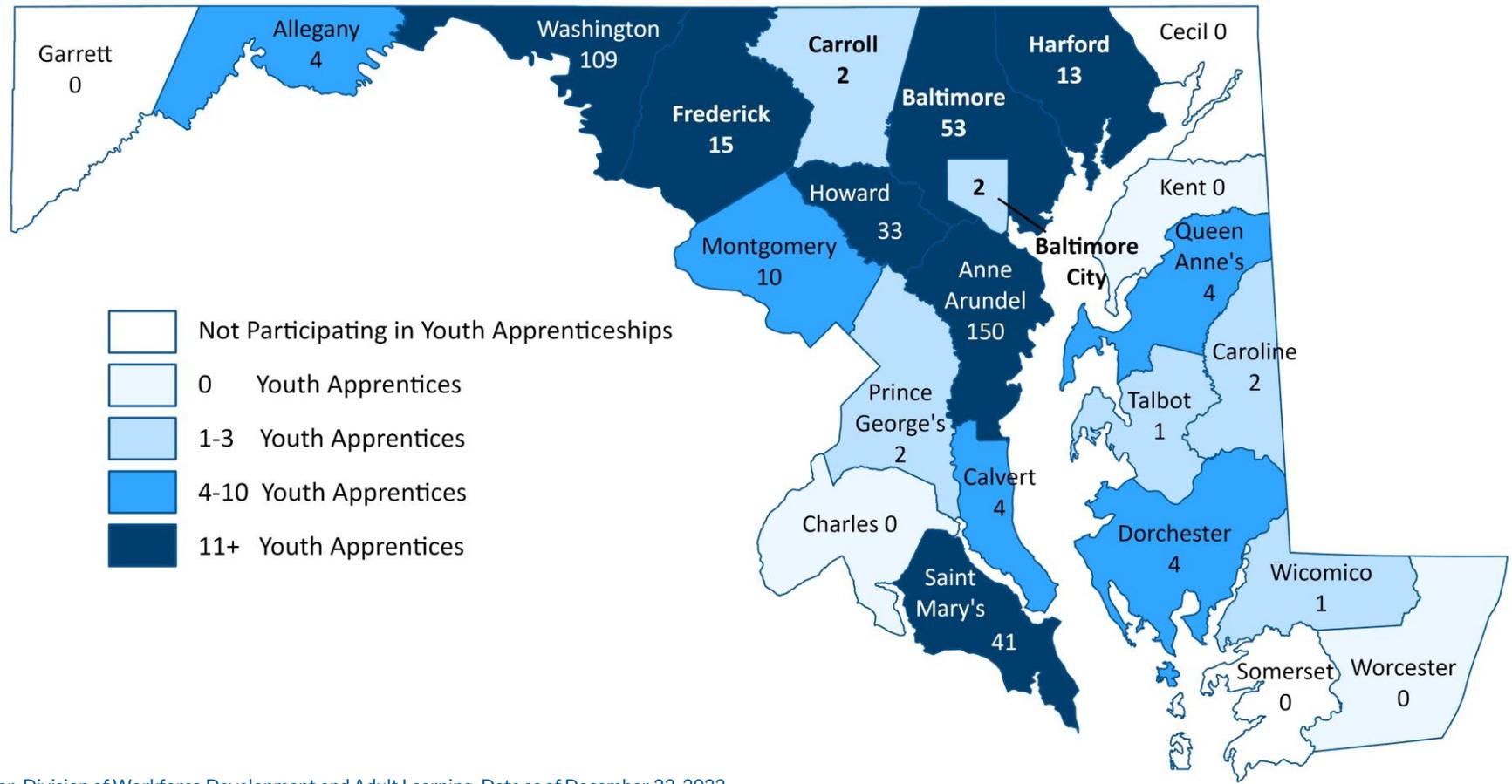
The number of students and businesses participating in apprenticeships in Maryland grew significantly from 2017-18 to 2022-23.



Source: Maryland Department of Labor, Division of Workforce Development and Adult Learning. Data as of December 22, 2022.

Youth Apprentices by County

More than half of all youth apprentices in Maryland are students in Anne Arundel and Washington counties. Currently, 7 out of 24 LEAs have more than 10 youth apprentices.



Source: Maryland Department of Labor, Division of Workforce Development and Adult Learning. Data as of December 22, 2022.

Industry Sectors of Employers for Youth Apprentices: 2022-23

Industry Sector	# of Youth Apprentices	% of Total
Government	166	36.9%
Education	73	16.2%
Construction	63	14.0%
Manufacturing	40	8.9%
Healthcare	37	8.2%
Automotive	20	4.4%
Hospitality and Tourism	20	4.4%
Business	13	2.9%
Information Technology	7	1.6%
Agriculture	2	0.4%
Animal Care	2	0.4%
Maritime	2	0.4%
Architecture	1	0.2%
Association Management	1	0.2%
Communications	1	0.2%
Finance, Banking and Real Estate	1	0.2%
Transportation and Logistics	1	0.2%
Total	450	100.0%

Source: Maryland Department of Labor, Division of Workforce Development and Adult Learning. Data as of December 22, 2022.

Credential Attainment and Workforce Demand

- A 2020 report by Credentials Matter indicates that **only 18% of the credentials earned** by K-12 students nationwide are demanded by employers.
- 6 of the top 10 credentials earned are **very oversupplied** (table to the right).
- Some earned credentials are not recognized by employers or lead to occupations that do not command a **living wage**.

TOP 10 CREDENTIALS EARNED BY K-12 STUDENTS

RANK / CREDENTIAL	TYPOLGY	CREDENTIALS EARNED	STATE COUNT (OUT OF 30)	SUPPLY/DEMAND CATEGORY
1. Microsoft Office Specialist		176,633	25	
2. NCCER - Core Curriculum		96,767	17	
3. WISE Financial Literacy Certification		71,309	6	
4. Adobe Certified Associate		67,658	25	
5. Basic First Aid		65,032	15	
6. National Career Readiness Certificate (WorkKeys)		58,842	7	
7. Automotive Service Excellence Certification		45,237	29	
8. Virginia Workplace Readiness Skills for the Commonwealth		44,897	1	
9. OSHA 10-Hour - General		44,403	13	
10. ServSafe Certification (Manager/Food Handler/Allergens/Alcohol)		37,380	22	

Certification
 Software
 General Career Readiness
 License
 CTE Assessment

Very Undersupplied
 Moderately Undersupplied
 Supply Meets Demand
 Moderately Oversupplied
 Very Oversupplied

Source: Credentials Matter, Burning Glass Technologies and ExcelinEd. "Credentials Matter Phase 2: A 2020 Update on Credential Attainment and Workforce Demand in America." September 2020.



Student Experiences, Sample Schedules, and Spotlights

1. Perkins Deep Dive
2. Apprenticeships and CTE Data
3. College and Career Readiness Pathways: Apprenticeships in Maryland and the Blueprint
 - a. **Student Experiences, Sample Schedules, and Spotlights**
 - b. LEA Spotlight: Washington County

Expanding opportunities for students to participate in academics and apprenticeships

Student Apprenticeship Sample Schedules: Dorchester County

- Student A takes **English and Mathematics at Chesapeake College on Mondays and Wednesdays** and **works at their apprenticeship the remainder of the week.**
 - Additionally, they are a student athlete playing **Volleyball (Fall) and Softball (Spring).**
- Student B attends a **Computer Aided Drafting Design (CADD) program Monday, Wednesday, Friday at Dorchester Career and Technology Center (8:00-10:30 am).**
 - On **Tuesday/Thursday, they report directly the apprenticeship site at 8:00 am.**
 - They take academic core classes at their **high school Monday-Friday 11:10 am – 12:30 pm.**
 - Depending on the project they are working on at the apprenticeship location, they **may return to the work site in the afternoon, or their mentor may allow them to work remotely to conserve gas.**

Student Apprenticeship Sample Schedules: Frederick County

- Frederick County Public Schools students have **four classes each day** as part of a **semester block schedule**.
- **Most youth apprenticeship students** use the following schedule:
 - **Attend classes in the morning** for Blocks 1 & 2 (7:30-10:30 am)
 - **Work at their youth apprenticeship for Blocks 3 & 4**, continuing after the school day as well (11:00 am – end of workday).
 - **The exact schedule depends on the individual student and employer.** The expectation is to be at the jobsite at least 3 hours each day.

Student Apprentices Sample Schedules: Howard County

- Student apprentices typically attend work first thing in the morning, 6:00-11:00 am, and then go to their high school for English and Math courses in the afternoon.
 - Alternatively, students will go to school first and then go to work in the afternoon.
- The student's exact schedule will depend on the industry and employer and what time they are most needed.
 - Students also have the option to take their graduation requirement classes at Howard Community College.

Student Apprenticeship Sample Schedules: St. Mary's County

- Each student receives an individualized schedule to accommodate the apprenticeship hours and course schedules.
- Student A will take English and Math at their high school during periods 1 and 2 and then leave for their apprenticeship.
- Student B may go to the Forrest Center for their CTE courses for periods 3, 4, and 5. They then leave for their apprenticeship after period 5 (about 12:15 pm).

Reimagining Student Schedules

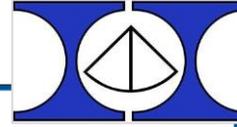
- These **examples of the flexibility** needed to balance the different components show how a school and a student can **work together to make an apprenticeship happen**.
- As a state, **Maryland needs policies that support LEAs to be creative and strategic at scale** to maximize students' **apprenticeship opportunities** while finishing high school successfully.
 - The State Board and MSDE are **committed to ensuring that this policy landscape exists**.
- **Possible innovations** to support students include:
 - Altering the **length of a course** (e.g., semesterizing a one-year course, etc.).
 - Offering **virtual courses**, either synchronously or asynchronously.
 - Scheduling courses **outside of the normal school day**.
 - **Coordinating with the community college** to offer courses there.
 - Encouraging **working at the apprenticeship during the weekend**, when appropriate.
 - Hiring **apprentices at the LEA** central office (e.g., Graphics and Printing, Operations, etc.)
 - Earning **high school credit over the summer**.

Apprenticeships Spotlight: Anne Arundel County



Leah Sawyer

- Leah is currently completing an apprenticeship, through the Center of Applied Technology North Welding program, as a welder for the US Coast Guard Yard.
- Her responsibilities include maintaining Coast Guard ships by fixing the hull, welding in new items, and building up the ships floors to prevent damage.
- She will graduate in May 2023 and is excited about her future with the Coast Guard Yard.



Savannah Gross

- Savannah is completing a carpentry program, through the Center of Applied Technology South.
- Working for Hartge Yacht Yard, Savannah uses various tools to construct, fit, repair, and install fixtures, flooring, and cabinetry in boats.
- She will graduate in 2023 with the plan to stay on at Hartge Yacht Yard and continue to refine her woodworking skills.



Jackson Zimmerman

- Jackson completed an apprenticeship with Toyota of Annapolis, through the Center of Applied Technology North's Auto Technology Program.
- As an entry-level technician, Jackson provides preventive maintenance and small repairs—work that includes using diagnostic equipment.
- He will graduate in 2023 and plans on staying in the Auto Industry and work on becoming a technician.

Employer Spotlight: Dynamic Auto

- Dynamic Auto, in Frederick Maryland, needed highly educated technicians to maintain and repair the vehicles of today and tomorrow.
- They have robust High School and adult Apprenticeship programs, which are the exclusive options for recruiting talent.
- Their High School Apprenticeship Program is the door for someone that is considering a career in the Automotive Repair and Service industry.



“There are more lines of computer code in today’s car than in the F35 strike fighter, a lot more.”

- 
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LEA Spotlight: Washington County Public Schools

An Exploration of WCPS's youth apprenticeship program.



WCPS | Washington County Public Schools

YOUTH APPRENTICESHIP MARYLAND PROGRAM

Dr. David Sovine, SUPERINTENDENT

Dr. Gary Willow, ASSOCIATE SUPERINTENDENT FOR CURRICULUM AND INSTRUCTION

Mr. James Aleshire, SUPERVISOR OF CAREER AND TECHNICAL EDUCATION

Ms. Wendy Moore, APPRENTICESHIP COORDINATOR

MARYLAND STATE BOARD OF EDUCATION MEETING – OCTOBER 25, 2022

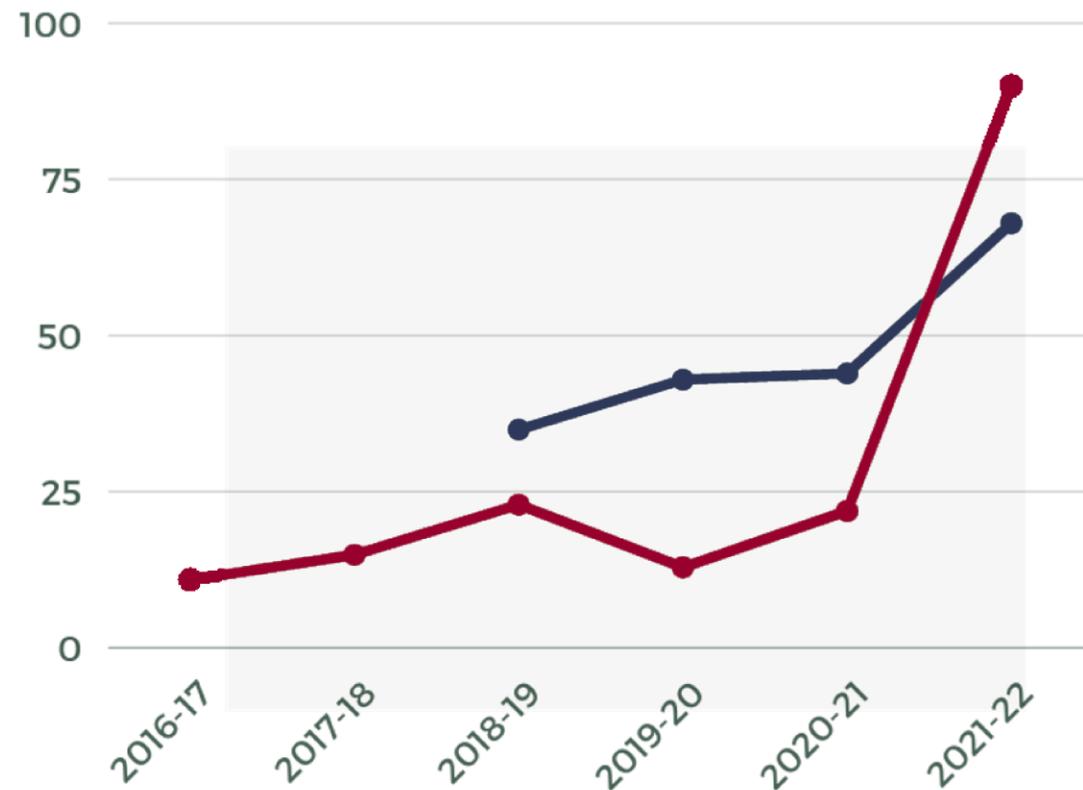
WCPS | Washington County
Public Schools

WCPS YOUTH APPRENTICESHIP GROWTH

Reported by the Youth Apprenticeship Advisory Committee 7/19/22

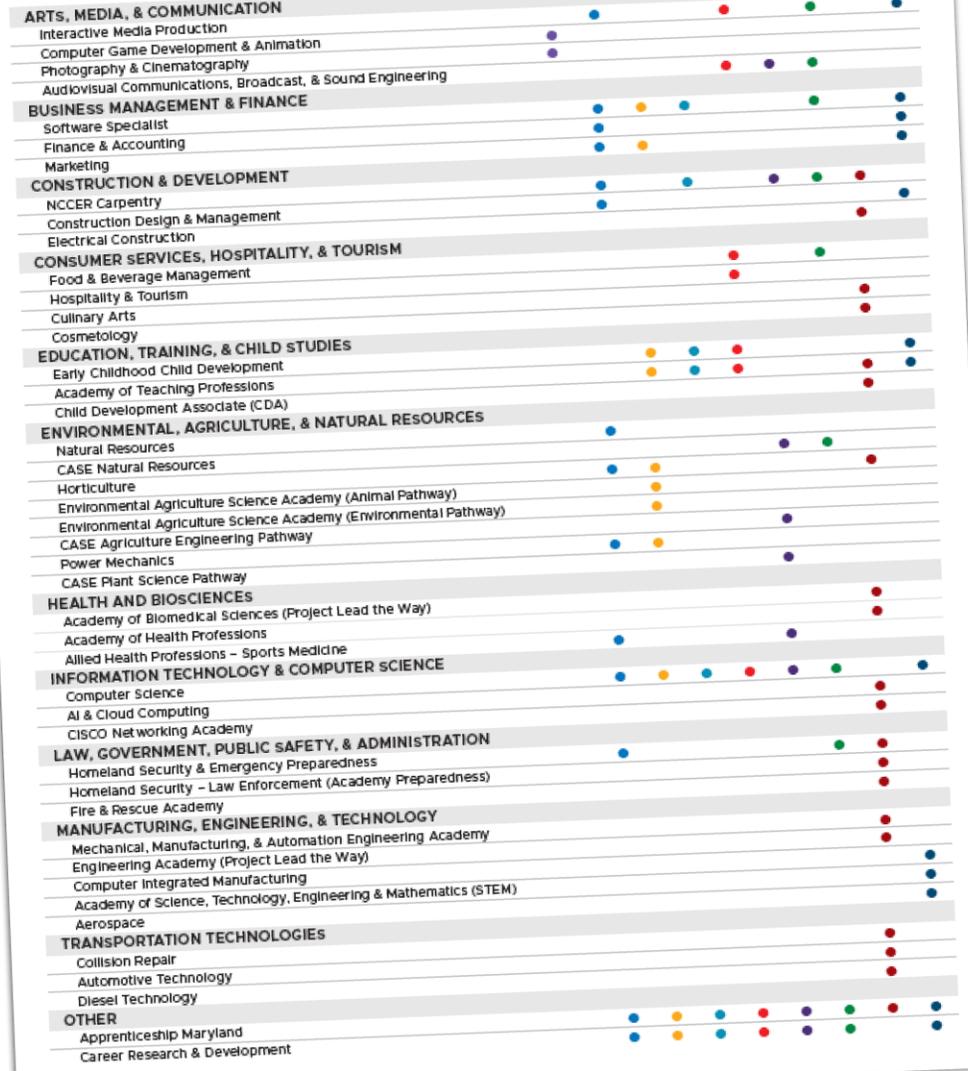
APPRENTICESHIP PLACEMENTS

EMPLOYER PARTNERS



UPDATED 9/2022
**CAREER TECHNOLOGY EDUCATION
 COMPLETER PROGRAMS AND
 PATHWAYS BY HIGH SCHOOL**

BISFA
 BOONSBORO
 CLEAR SPRING
 HANCOCK
 NORTH
 SMITHSBURG
 SOUTH
 BIM IN TECH
 WILLIAMSPORT



APPRENTICESHIPS

begin with strong
 CTE programs in
 every high school

INDUSTRY SECTORS OF EMPLOYERS

for WCPS Apprentices

CAREER TECHNICAL EDUCATION CLUSTER	EXAMPLE OCCUPATIONS	% OF YOUTH APPRENTICES
Arts, Media & Communication	Production Assistant, Sales & Marketing	3%
Business Management	Mail Processing, Office Assistant	11%
Construction & Development	Electrician, Mason, Carpenter, HVAC, Fire Sprinkler Technician, Alarm Technician	13%
Consumer Services	Line Cook	3%
Health & Bioscience	Nutrition, Transporter, Medical Secretary, Therapy Technician	7%
Human Resource Services	Security Officer, Reading Tutor	35%
Information Technology	IT Technician	7%
Manufacturing & Engineering	Machine Operator, Production Technician, Engineer, Welder, Painter	12%
Transportation	Auto Tech, Collision Technician, Heavy Equipment Service Technician	9%

EMPLOYER RECRUITMENT & ENGAGEMENT

- **INTERACTION WITH EMPLOYERS**

- Host & attend community events (*such as Chamber of Commerce & Greater Hagerstown*)
- Targeted recruitment based on student interest
- CTE teachers and school counselors attend employer events
- Invite employers to schools to speak with students
- Market CTE programs

- **PROVIDE EXCELLENT CUSTOMER SERVICE TO OUR EMPLOYERS**

- Create marketing materials for student recruitment
- Assist with the Maryland Department of Labor application process

STUDENT RECRUITMENT & RETENTION

- **TARGETED RECRUITMENT**

- Website
- School recruitment fairs
- CTE teachers and school counselors

- **TARGETED INSTRUCTION**

- Summer courses
- Employer-based training

- **INDIVIDUALIZED PLANNING**

- Transcript reviews to see what related instruction the student has had
- Provide flexible options for students to access related instruction

- **RETENTION SUPPORTS**

- Employers complete monthly assessments on student progress
- Student Apprentices have bi-monthly check-ins with the Apprenticeship Coordinator
- The Apprenticeship Coordinator completes bi-monthly site visits

MULTIPLE SCHEDULING OPTIONS

JUSTIN (JUNIOR) ATTENDS SCHOOL FOR THREE MORNING COURSES, & ATTENDS HIS APPRENTICESHIP IN THE AFTERNOON

Algebra II
8:35 AM – 9:23 AM

English 11
9:27 AM – 10:12 AM

World History
10:16 AM – 11:01 AM

APPRENTICESHIP
can start at 11:01 AM

WONDER (SENIOR) ATTENDS ACADEMIC COURSES & HIS APPRENTICESHIP ON ALTERNATING DAYS

A DAY

Advanced Geo Systems
9:05 AM – 10:27 AM

Computer Forensics
10:31 AM – 11:48 AM

Financial Literacy
11:52 AM – 1:37 PM

English 12
1:41 PM – 3:00 PM

B DAY

Homeland Security
9:05 AM – 11:48 AM

APPRENTICESHIP
can start at 11:48 AM

PROGRAM PROCESSES

- **EMPLOYER ONBOARDING**

- Occupation and instruction review

- **OCCUPATION ADVERTISING**

- Electronic newsletter, website

- **APPLICATION AND HIRING PROCESS**

- Interviews

- **APPRENTICE ONBOARDING**

- Agreements, code of conduct, Google Classroom, timesheets

- **RETENTION**

- Monthly assessment surveys, check-ins, site visits

FINANCIAL IMPLICATIONS

COSTS FOR STUDENT	COSTS FOR EMPLOYER	COSTS FOR WCPS
<ul style="list-style-type: none">• Uniforms & equipment• Driver's license, transportation, gas, etc.	<ul style="list-style-type: none">• Hourly wage for apprentice• Time investment to mentor & train student	<ul style="list-style-type: none">• Apprenticeship Coordinator salary• Additional staff pay for summer school courses• Hiring of Apprentices (Trades, Tutors)

WCPS STUDENT APPRENTICES



WONDER HERRERA

Meritus Health
Security Apprentice



ARIONNA BARNETT

Washington County Public Schools
Reading Tutor Apprentice



JUSTIN WINGFIELD

Total Comfort Heating & Air
HVAC Apprentice

Questions